

**Climatological Data for August, 1910.**  
**DISTRICT No. 4, LAKE REGION.**

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**GENERAL SUMMARY.**

The month of August, 1910, in the Lake region was marked by fairly even temperature conditions, and by irregular distribution of rainfall. The amount of sunshine was above the average in most portions of the district, and it was especially abundant in the sections south of the Lake region, where the precipitation was decidedly deficient. As a rule, the streams and rivers were low, but those draining the basin of Lake Michigan received quite heavy rainfalls after the middle of the month and began to rise slowly. In the extreme eastern sections low water continued throughout the entire period and in some instances springs were reported to be failing. Low readings were marked by the Lake Champlain gage during the latter half of August, the levels being only slightly higher than that of the same period last year, and less than 1.5 foot above the low-water mark of 1888. The difficulties of using stream flow for power, noted last month, spread to other sections, as shown by the following extract from the Montpelier Daily Journal in its issue of August 26:

The lack of rain is inconveniencing the manufacturing firms along various rivers, who depend upon water power to turn their wheels. Some of them state that unless there is rain within a short time they will be obliged to resort to steam.

The main features of meteorological interest during the month are summarized in the table below, which presents the mean values for such portions of the various States as are included in Climatological District No. 4:

Portions of States lying within District No. 4.	Mean.									
	Temperature.	Departure from normal.	Precipitation.	Departure from normal.	Snowfall.	.01 inch or more precipitation.	Number of days.	Clear.	Partly cloudy.	Cloudy.
Minnesota.....	62.1	- 0.6	1.72	- 1.03	0	8	10	14	7	ne.
Wisconsin.....	68.2	+ 1.2	3.65	+ 0.46	0	8	13	11	7	sw.
Illinois.....	73.3	+ 2.1	3.08	+ 0.20	0	6	10	15	6	s.
Indiana.....	71.3	- 0.8	3.16	+ 0.50	0	8	16	8	7	w.
Upper Michigan.....	62.5	0.0	3.44	+ 0.51	0	8	13	8	10	w.
Lower Michigan.....	68.1	+ 0.3	2.96	+ 0.23	0	7	13	10	8	sw.
Ohio.....	71.1	+ 0.4	1.82	- 1.04	0	6	18	8	5	sw.
Pennsylvania.....	70.0	+ 0.6	1.76	- 1.33	0	9	14	13	4	s.
New York.....	66.4	+ 0.1	3.50	+ 0.11	T	9	15	10	6	s.
Vermont.....	64.8	- 0.8	4.04	- 0.25	0	10	11	11	9	s.

**TEMPERATURE.**

Except along the western shores of Lake Michigan and Lake Superior, the mean monthly temperatures did not exceed the normal by more than 1° in any portion of the district. Generally, in the extreme southwestern portion, the Lower Michigan Peninsula, and the region lying to the south of the lower Lakes, temperatures somewhat in excess of their respective normals were experienced. In Upper Michigan the mean temperature was the same as the seasonal average, while in the western Superior region, the Lake Champlain Basin, and in northern Indiana there was a slight deficiency in temperature.

As was the case with the monthly mean temperatures, the daily values kept within a comparatively small range. At no station in the entire district did the daily mean exceed its normal by more than 13° nor fall below it by more than 12°. There were, therefore, no pronounced periods of heat or cold; and as there were only a few temperature changes of marked

degree, the conditions throughout the month were generally pleasant and comfortable.

The first few days of the month were marked by moderate temperatures in practically all portions of the district, although in New York State a number of stations experienced the maximum heat of the period on the 3d. These were followed by somewhat cooler weather from the 4th to the 7th, inclusive, during which time a few scattered stations in Upper and Lower Michigan recorded their lowest readings. At the majority of stations, however, the minimum did not occur until the closing days of the month. From the 7th to the 11th nearly normal conditions again prevailed. From the 12th to the 17th the temperature was above normal, and it was during this time that the maximum heat of the month occurred generally over the Indiana and Ohio portions of the district, as well as at many stations in the Michigan peninsulas and in localities of Vermont. In nearly all other sections of the district the highest temperatures occurred during the warm period of the 20-25th, which accompanied the advance of a storm area of considerable magnitude in its passage across the Lake region.

This storm was followed by sharp, although not exceptional, falls in temperature, the cool period of the 25-27th being generally the severest of the month. Cool weather continued in the extreme eastern sections until the 31st. Frost were reported from scattered localities in Wisconsin on the 26th. In New York light to killing frosts occurred at several stations during this time: At Keene Valley on the 30th; at Lake Placid Club on the 12th, 20th, and 30th; at Nehasane on the 27th; at Tupper Lake on the 27th and 30th; and at Wedgewood on the 27th. Frost also occurred on the mornings of the 27th and 30th in exposed localities of the Vermont portion of the district, mostly at the foot of ravines leading from the mountain ranges. Very little damage was done to staple crops, it being confined chiefly to tender vines.

**PRECIPITATION.**

In the Lake Michigan Basin, and in that portion of New York State lying within the district, precipitation fell in excess of the normal; but elsewhere there was a deficiency, the lack of moisture being quite pronounced over northern Ohio, north-eastern Indiana, and the region of western Lake Superior, where drought conditions continued from the previous summer months. The following extracts from the reports of Weather Bureau officials set forth the extreme dryness which has prevailed in these sections during the present season:

*Minnesota.*—The growing season (counting from March 1 to August 31) of 1910 has been the driest in 40 years. In this connection the data below may be of interest:

	Precipitation.	
	Actual 1910.	Normal.
March.....	Inches.	Inches.
April.....	0.44	1.55
May.....	1.40	2.14
	1.18	3.47
Spring totals.....		
June.....	3.02	7.16
July.....	0.11	4.53
August.....	3.89	3.65
	2.41	3.53
Summer totals.....		
	6.41	11.71
Seasonal totals.....		
	9.43	18.87

There have been drier springs and drier summers, but the deficiency did not continue throughout the whole season. The previous low record of rainfall for dry growing seasons, spring and summer combined, is 11.25 inches, in 1883.—H. W. Richardson, Local Forecaster, Duluth.

*Ohio.*—This was one of the driest Augusts on record. The average amount of rainfall for this portion of the district was more than 1 inch below the normal, and at only 3 stations was there an excess. There were fewer rainy days than usual for August, and the rains that did occur were generally only light showers.

While the lack of moisture was general, it was especially severe in the middle counties, where the rainfall was light in June and July also. At Cleveland the total for the 3 summer months was only 4.03 inches, the lowest recorded in 40 years. At Hiram, Portage County, the total for the 3 months was but 4.22 inches, the lowest on record at that station. At Bucyrus the 3 months fall was 5.59 inches; Medina, 4.90 inches; Oberlin, 4.66 inches; Wellington, 5.06 inches; and Willoughby, 4.56 inches. These stations have, however, received less amounts in other years, and the summers of 1886, 1893, and 1894 were very dry.—*J. Warren Smith, Local Forecaster, Columbus.*

In the Lake Michigan Basin, and in the central portion of Upper Michigan, the amount of precipitation was considerably in excess of the normal. Although there was a fairly good distribution of rainfall over this section after the middle of the month, yet the greater portion of the amount received fell during the 22d–26th, when 24-hour falls of from 1 inch to 3 inches were general. In New York State the precipitation was slightly above the normal, and was exceptionally well distributed both in regard to locality and time of occurrence. In the Lake Champlain Basin the rainfall was confined chiefly to the first 11 days of the month, with the exception of the 8th and 9th, and the amounts ranged from 2.57 inches at Northfield to 5.03 inches at Wells, in Rutland County. The rainfall in this section was sufficient for the needs of vegetation generally, although it had no appreciable effect in raising the brooks and stream levels.

Snow was recorded at but one station in the district, the amount being only a trace, which fell at Blue Mountain Lake, N. Y., on the morning of the 5th.

#### LOCAL STORMS.

During the passage of the disturbance of the 20–25th, referred to in the discussion of temperature conditions, a number of local storms swept the region lying around the northern end of Lake Michigan, causing considerable damage locally. The following extracts relative to the severest of these storms are from the reports of Weather Bureau officials:

*Escanaba.*—The storm on the afternoon of the 22d was severe, with very heavy thunder from 4 to 6 p.m. The clouds were very threatening at 4 p.m., so much so that a tornado was feared. It became so dark at 4:15 p. m. that one could not read the time from a watch without artificial light. Although this was more than 2 hours before sunset, yet stores and dwellings had to be lighted up as if it were night. The precipitation was excessive from 4:11 p. m. to 5:37 p. m., during which time 1.86 inch fell. Streets and basements were flooded, 2 buildings were struck by lightning, and a great deal of damage was done to telegraph, telephone, and electric light lines.

*Houghton.*—A hailstorm occurred on the 24th. The ground was completely covered by the hailstones, which were about  $\frac{1}{2}$  inch in diameter. No serious damage, however, resulted.

*Sault Ste. Marie.*—The worst hailstorm on record at this station occurred on Sunday, August 21. Hailstones, some of them larger than walnuts, fell in large quantities, and were accompanied by heavy rain. Many panes of glass in hothouse windows and skylights were broken, and some damage to other light structures was reported.

*Scottsville, Mich.*—A destructive storm, which was apparently a true tornado, occurred at Scottsville, Mason County, Mich., at about 9 a. m., August 25. The storm exhibited a pendant funnel-shaped cloud with rotary winds. Apparently the tornado pursued, for a short distance, an unusual course from northwest to southeast, but soon recurred and moved in the usual northeasterly direction. The path of greatest destruction was from 50 to 100 feet in width. On the north side of this track prostrated trees fell toward the south, in the center toward the southeast, and on the south side, toward the northwest. The path of the storm was several miles in length, during the course of which a number of buildings were moved from their foundations or unroofed. At one point a partially completed cement block house was leveled to the ground. No lives were lost, and only 2 persons were injured, neither seriously. The estimated damage is \$5,000.

On the night of the 22–23d numerous severe thunderstorms occurred over northern and central Michigan, especially in the vicinity of the western shore. Newspaper reports from Boyne, Ludington, Ada, Middleville, Reed City, Coopersville, Muskegon, Saginaw, Jackson, Whitehall, Holland, and Vicksburg show the damage resulting from lightning discharges to have been considerable; and there were undoubtedly other localities affected from which no reports were secured.

#### MISCELLANEOUS.

Smoke and haze, evidently brought by the upper air currents from the forest fires of the northern Rockies, were observed at various stations of the district during the latter portion of the month. The smoky conditions were most pronounced from the 22d to the 25th. As observed at Duluth and Marquette the smoke had a distinct yellowish color, the light from which was reflected to the earth, giving a vivid green appearance to all vegetation. At these two stations the smoke cut off so much of the sun's illumination as to render the use of artificial light necessary on the 22d, and at the former on the 23d as well. At Canton, N. Y., the haze of the 23d–25th was so dense as to obscure the sun for more than one hour after rising and before setting.

Dense fog occurred on the 3d over the Detroit River, and on the 12th and 20th over southern Lake Huron. These fogs interfered somewhat with navigation, and a few vessels were reported to have grounded while endeavoring to work through them.

Auroras were observed at Milwaukee, Wis., on the night of the 9–10th, and at Burlington, Vt., on the 21st and 28th.

TABLE 1.—Climatological data for August, 1910. District No. 4, Lake Region.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest Date.	Lowest Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmeted.	Number of rainy days, 0.10 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of fully cloudy days.				
<i>Minnesota.</i>																				
Duluth.	St. Louis.	1,133	39	62.8	- 1.7	85 20	44 31	29	2.41	- 1.04	1.71	0.0	10	10	11	10	ne.	U. S. Weather Bureau.		
Floodwood.	do.	1,257	6															M. H. Schussler.		
Mount Iron.	do.	1,510	16	61.6	- 0.7	89 20	29 26	45	1.04	- 2.95	0.35	0.0	5	8	13	10	nw.	Oliver Iron Mining Co.		
Stephens Mine.	do.	1,500	3	60.1	+ 0.7	88 20	29 26	45	1.45	0.67	0.67	0.0	8	10	17	4	sw.	Do.		
Two Harbors.	Lake.	614	16	64.0	+ 0.7	85 16†	40 31	35	2.00	- 1.80	0.50	0.0	8	10	17	4	ne.	George W. Watts.		
Virg.als.	St. Louis.	1,434	16															Oliver Iron Mining Co.		
<i>Wisconsin.</i>																				
Appleton.	Outagamie.	795	11	71.5	+ 3.6	93 22	47 26	33	4.10	+ 1.75	1.45	0.0	10	18	7	6	s.	Wm. O. Thiede.		
Ashland.	Ashland.	647	16	64.0	- 3.1	91 21	43 26†	47	1.87	- 1.27	0.83	0.0	9	15	13	3	ne.	Sam Wheeler.		
Eayfield.	Bayfield.	635	2	66.5	-	86 20	49 30	27	1.44	-	0.65	0.0	6	19	7	5	nc.	Ruben V. Ryder.		
Ceel.	Shawano.	804	3	67.0	-	92 22	43 31	49	4.53	-	0.95	0.0	10	10	17	4	sw.	Louis W. Schmidt.		
Chilton.	Calumet.	860	16	69.6	+ 1.4	92 23	48 26†	37	3.46	+ 0.65	1.50	0.0	9	10	13	2	sw.	Daniel V. Jones.		
Crandon.	Forest.	1,060	15	65.0	+ 1.4	96 18	41 31	35	2.63	+ 0.03	1.10	0.0	4	20	4 <sup>d</sup>	3 <sup>d</sup>	s.	Calvin T. H. Riggs.		
Florence.	Fond du Lac.	1,293	19	63.3 <sup>b</sup>	- 0.1	86 16	39 26	34†	2.75	- 0.45	0.89	0.0	4	12	9	nw.	Fred S. Evans.			
Fond du Lac.	Fond du Lac.	800	24	70.6	+ 2.9	93 22†	43 26†	41	4.22	+ 1.08	1.70	0.0	9	19	4	8	sw.	Geo. W. Marshall.		
Grand River Locks.	Marquette.	770	14	70.3	-	93 12	39 6†	51	4.18	+ 2.0	1.18	0.0	7	22	3	7	sw.	Jerry Parkinson.		
Green Bay.	Brown.	617	24	68.8	+ 1.8	92 22	46 26	29	6.08	+ 2.98	2.81	0.0	12	3	11	17	se.	U. S. Weather Bureau.		
Iron River.	Bayfield.	1,096	1	65.8	-	88 21†	42 26	28	2.98	-	0.60	0.0	9	15	6	8	sw.	Harry C. Hall.		
Kewaunee.	Kewaunee.	590	1	66.7	-	88 3	46 26	28	4.65	-	1.80	0.0	9	8	13	10	s.	Eugene V. Kimball.		
Manitowoc.	Manitowoc.	816	59	67.9	+ 1.4	92 3	48 26	30	3.17	+ 0.18	1.24	0.0	9	14	8	9	sw.	Johanna Lups.		
Menasha.	Winnebago.	764	13	-					3.53	+ 1.22	1.42	0.0	7	23	4	4	se.	George T. Allanson.		
Menominee Falls.	Waukesha.	842	1	70.2	-	93 22	44 26	35	3.43	-	0.98	0.0	7	18	7	6	sw.	Arthur H. Christman.		
Milwaukee.	Milwaukee.	681	40	70.6	+ 1.9	89 24	51 26	28	2.75	-	0.07	0.84	0.0	12	11	9	w.	August H. Pape.		
New London.	Outagamie.	783	14	70.4	+ 2.4	95 22	42 26	39	2.78	-	0.19	0.97	0.0	7	9	15	7	sw.	William K. Smith.	
Oconto.	Oconto.	590	19	68.2	+ 0.9	90 12	44 26	35	5.98	+ 3.48	2.65	0.0	11	12	13	6	sc.	Evan Vincent.		
Oshkosh.	Winnebago.	744	21	70.4	+ 1.6	92 23†	44 26	38	3.31	+ 0.47	1.50	0.0	8	15	1	1	sw.	George H. Carpenter.		
Pine River.	Waushara.	900	15	70.2	+ 2.1	91 22	43 26	37	1.63	- 1.35	0.58	0.0	9	8	19	4	nw.	John P. Whelan.		
Plum Island.	Door.	588	2	66.6	-	78 23	51 19	22	7.76	-	5.37	0.0	7	6	13	12	s.	Paul O. Feldrappe.		
Plymouth.	Sheboygan.	843	1	69.6	-	91 22	47 26	33	4.02	-	1.27	0.0	9	10	12	9	sw.	Richard C. Kann.		
Port Washington.	Ozaukee.	713	17	68.7	+ 0.9	87 3	48 26	30	3.03	-	0.01	0.66	0.0	7	15	6	10	se.	Daniel Davis.	
Racine.	Racine.	633	13	71.3	+ 0.7	91 8	44 26	33	2.24	-	0.80	1.03	0.0	9	12	12	7	ne.	Ripon College.	
Ripon.	Fond du Lac.	935	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Louis C. Meyer.		
Sheboygan.	Sheboygan.	831	12	69.0	+ 0.6	88 13	49 26	30	4.93	+ 2.04	1.65	0.0	9	13	11	7	se.	Adam N. Dler.		
Sturgeon Bay.	Door.	600	12	66.0	- 0.2	85 3	47 11	27	7.01	-	4.57	0.0	8	13	12	6	s.	Edward B. Banks.		
Superior.	Douglas.	671	1	64.3	-	86 20	44 31	33	1.87	-	0.92	0.0	6	11	15	5	ne.	James H. Flagg.		
Waupaca.	Waupaca.	857	14	69.0	+ 0.9	92 22	43 26†	44	2.66	-	0.59	0.66	0.0	12	8	7	16	sw.	U. S. Weather Bureau.	
<i>Illinois.</i>																				
Chicago.	Cook.	824	40	73.3	+ 2.1	89 22	53 26	23	3.08	+ 0.20	1.81	0.0	6	10	15	6	s.	U. S. Weather Bureau.		
<i>Indiana.</i>																				
Auburn.	De Kalb.	874	14	65.8	- 4.5	87 17	41 27	38	4.11	+ 0.89	2.56	0.0	9	21	4	6	w.	Mrs. Josie B. Kuhlman.		
Berne.	Adams.	849	72	72.2	-	96 15	45 27†	41	2.25	-	1.20	0.0	7	17	10	4	nw.	H. M. Reusser.		
Elkhart.	Elkhart.	801	8	73.4	-	95 15	48 26	33	3.01	-	1.13	0.0	11	15	10	6	sw.	Dr. Miles Medical Co.		
Fort Wayne.	Allen.	775	14	71.8	+ 0.7	96 17	45 27†	44	3.98	+ 0.69	2.66	0.0	10	11	8	12	sw.	Orion E. Mohler.		
Hammond.	Lake.	598	19	72.3	+ 0.8	94 12	44 26	31	4.12	-	1.38	0.0	4	14	10	7	w.	Carson W. Whitney.		
Howe.	Lagrange.	886	5	70.4	-	95 9	45 27†	35	1.93	-	0.92	0.0	5	22	1	8	w.	James E. Zook.		
South Bend.	St. Joseph.	726	17	71.3	- 0.4	94 15	46 27	36	2.82	-	0.44	1.00	0.0	11	18	5	8	se.	Henry H. Swaim.	
Whiting.	Lake.	606	73.0	-		89 15†	48 26	30	4.09	-	2.06	0.0	6	7	14	10	ne.	D. H. Boyd.		
<i>Michigan—Upper Peninsula.</i>																				
Baraga.	Baraga.	623	8	62.8	-	90 12	35 21	31	50	3.50	-	3.00	0.0	2	9	0	16	n.	D., S. S. & A. Ry.	
Bergland.	Ontonagon.	1,300	61.2	-		87 21	36 31	41	3.52	-	1.50	0.0	4	17	5	10	sw.	Frank McMonigal.		
Blaney.	Schoolcraft.	3	61.8	-		81 16†	36 19	36	4.24	-	1.40	0.0	7	20	1	10	s.	Dr. S. S. Hackwell.		
Calumet.	Houghton.	1,246	22	62.8	+ 0.6	84 20	42 25	29	4.69	+ 2.32	1.28	0.0	9	18	6	7	w.	E. S. Grierson.		
Chatham.	Alger.	875	9	60.4	-	86 12	34 19	40	3.97	-	1.03	0.0	14	7	12	12	n.	U. P. Experiment Station.		
Deer Park.	Luce.	610	9	62.8	-	88 7	48 7†	40	1.90	-	0.95	0.0	5	13	1	17	sw.	Mrs. Saro E. McGaw.		
Detour.	Chippewa.	585	9	-		80 21	46 25	29	3.56	+ 0.39	1.55	0.0	6	14	12	5	w.	Dr. F. E. Cameron.		
Eagle Harbor.	Keweenaw.	623	11	62.1	- 0.2	80 21	46 25	29	3.56	+ 0.39	1.55	0.0	6	14	12	5	w.	John Nolen.		
Escanaba.	Delta.	612	37	63.2	- 1.3	77 21	44 26	28	5.22	+ 1.61	2.15	0.0	8	8	9	14	s.	U. S. Weather Bureau.		
Ewen.	Ontonagon.	1,147	9	61.7	-	88 22	34 19	45	4.14	-	1.02	0.0	10	16	1	14	w.	W. B. Hatfield.		
Grand Marais.	Alger.	610	9	-		88 17	50 25	20	2.17	-	0.58	0.0	7	9	1	21	sw.	Mrs. Lena Truedell.		
Houghton.	Houghton.	668	9	63.4	- 0.2	87 20	45 28	31	4.51	+ 1.64	1.62	0.0	15	10	13	8	w.	U. S. Weather Bureau.		
Humboldt.	Marquette.	1,536	13	60.3	+ 0.5	84 18†	32 19	44	3.16	+ 0.75	0.80	0.0	6	15	7	8	w.	D., S. S. & A. Ry.		
Iron Mountain.	Dickinson.	1,111	9	66.2	-	89 12	41 19	47	2.56	-	1.11	0.0	5	17	10	4	nw.	Chapin Mining Co.		
Iron River.	Iron.	1,504	13	61.0	-	86 12	35 19	48	2.90	-	1.20	0.0	5	21	8	2	w.	Victor D. Laing.		
Ironwood.	Gogebic.	1,520	7	64.2	-	88 21	40 26	33	2.40	-	0.50	0.0	10	16	9	6	nw.	Prof. J. V. Brennan.		
Ishpeming.	Marquette.	1,536	10	62.6 <sup>a</sup>	+ 0.4	87 12	41 20	28	2.65	- 1.00	0.80	0.0	9	10	14	7	nw.	Clifd'Cliffs Iron Co.		
Isle Royale.	Keweenaw.	610	3	61.0	-	74 17	50 25	20	2.17	-	0.58	0.0	7	9	1	21	sw.	John H. Malone.		
Mackinac Island.	Mackinac.	831	10	-		86 12	38 19	38	5.67	-	1.30	0.0	10	14	4	13	n.	M. I. S. P. Com.		
Maple Ridge.	Delta.	4	61.3	-		89 12	38 19	38	5.67	-	1.30	0.0	12	5	17	9	w.	Herman Johnson.		
Marquette.	Marquette.	734	39	62.9	- 0.6	90 12	45 25	34	2.88	+ 0.47	1.68	0.0	7	21						

TABLE 1.—Climatological data for August, 1910. District No. 4—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.					Precipitation, in inches.			Sky.			Prevailing wind direction.	Observers.					
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmeasured.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.			
<b>Michigan—Lower Peninsula—Cont'd.</b>																					
Charlotte.	Eaton.	6	60.2	.....	101	22	43	20	45	3.44	+ 1.13	1.35	0.0	10	12	10	9	nw.	City of Charlotte.		
Cheboygan.	Cheboygan.	611	65.0	0.0	90	21	42	29	34	4.25	+ 0.85	2.70	0.0	7	6	21	4	w.	E. A. Bouchard.		
Clinton.	Lanshee.	830	20	70.7	+ 0.6	97	15	40	27	40	2.31	- 0.12	0.85	0.0	5	12	14	5	sw.	David Woodward.	
Coldwater.	Branch.	984	13	70.7	+ 0.8	92	15†	44	26	34	3.55	- 0.25	0.0	0.0	3	18	7	6	sw.	Lake Shore & Mich. So. Ry.	
Concord.	Jackson.	5	70.5	.....	97	17	42	27	41	2.82	.....	1.60	0.0	3	13	17	1	sw.	Dr. W. N. Armstrong.		
Croton.	Newago.	685	2	68.6	.....	89	15	42	26	35	2.86	.....	0.86	0.0	6	4	24	3	w.	C. R. Mus. Power Co.	
Detroit.	Wayne.	730	39	70.6	+ 0.7	91	17	45	28	27	1.11	- 1.66	0.35	0.0	7	9	11	11	c.	U. S. Weather Bureau.	
Durand.	Shiawasse.	799	3	70.3	.....	91	13†	44	27	34	1.60	.....	0.42	0.0	6	18	8	5	sw.	Grand Trunk Ry.	
East Tawas.	Iosco.	590	13	66.0	+ 0.2	82	9	45	26	28	1.48	- 1.21	0.40	0.0	8	22	8	1	w.	Detroit & Mackinac Ry.	
Eloise.	Wayne.	640	13	68.8	- 0.3	92	14†	44	27	36	2.51	.....	1.00	0.0	7	14	12	5	se.	John Gilmore.	
Flint.	Genesee.	730	21	68.8	+ 1.3	92	18	42	27	33	1.78	- 0.78	0.50	0.0	9	14	13	4	w.	Wm. L. Fisher.	
Frankfort.	Benzie.	589	6	67.2	.....	84	17	53	26	30	5.07	.....	2.10	0.0	6	16	0	15	s.	Capt. Geo. Moreney.	
Ganges.	Allegan.	665	1	69.7	.....	89	15	51	27	30	2.49	.....	1.85	0.0	4	17	9	5	sw.	H. H. Hutchins.	
Gaylord.	Otsego.	1,387	5	64.2	+ 2.3	84	22	45	18	25	2.48	.....	1.18	0.0	3	18	0	13	sw.	Michigan Central R. R.	
Gladwin.	Gladwin.	794	14	68.4	+ 2.3	90	12†	41	26	45	2.00	- 0.39	1.00	0.0	3	22	5	4	sw.	Geo. R. Smith.	
Grand Haven.	Ottawa.	628	29	67.8	0.0	86	15	51	19	27	3.21	+ 0.63	1.92	0.0	10	13	11	7	s.	U. S. Weather Bureau.	
Grand Rapids.	Kent.	707	21	70.6	+ 0.6	92	15	48	26	29	3.28	+ 0.69	2.84	0.0	6	11	16	sw.	Joseph W. Morris.		
Grape.	Monroe.	625	20	70.8	+ 0.7	95	17	43	27	38	1.64	- 0.93	0.39	0.0	8	13	12	6	w.	Menzo Conklin.	
Grass Lake.	Jackson.	989	4	70.4	.....	98	17	44	27	35	2.64	.....	0.80	0.0	5	22	0	8	w.	Dr. Oscar Palmer.	
Grayling.	Crawford.	1,147	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Pere Marquette R. R.	
Habor Beach.	Huron.	635	22	64.8	- 1.6	88	13	40	5	38	2.15	- 0.54	1.00	0.0	3	22	3	6	nc.	Do.	
Harrison.	Clare.	1,159	17	67.0	+ 1.4	90	15†	44	26	40	2.95	+ 0.85	1.37	0.0	4	20	3	8	w.	Dr. D. W. Mitchell.	
Harrisville.	Alcona.	616	26	64.4	- 0.9	87	13	40	26	32	2.03	- 1.21	0.68	0.0	8	9	11	11	sw.	Pere Marquette R. R.	
Hart.	Oceana.	698	18	.....	.....	91	1	.....	.....	.....	5.93	+ 3.54	2.30	0.0	5	7	20	4	sw.	C. F. Letzprandt.	
Hayes.	Huron.	620	20	65.7	- 0.8	87	17†	45	26†	30†	1.69	- 1.11	0.92	0.0	5	20	0	11	nw.	A. D. De Garro.	
Highland.	Oakland.	830	18	.....	.....	.....	.....	.....	.....	.....	1.83	- 0.52	0.84	0.0	5	11	7	13	sw.	Prof. C. L. Herron.	
Hillsdale.	Hillsdale.	1,150	13	68.4	- 0.5	89	15†	43	27	33	2.40	- 0.36	0.82	0.0	1	11	7	13	sw.	Frank Sharp.	
Holland.	Ottawa.	610	4	67.7	.....	87	15	45	6	34	3.22	.....	2.67	0.0	8	10	19	2	sw.	William Bice.	
Howell.	Livingston.	924	18	68.1	+ 0.2	90	15	42	26	40	2.09	.....	0.74	1.30	0.0	5	14	5	8	sw.	Kalamazoo Asylum.
Ivan.	Kalkaska.	21	65.4	+ 0.2	88	12†	37	2	32	3.95	+ 0.90	1.87	0.0	7	12	14	5	nw.	State Board of Health.		
Jackson.	Jackson.	927	13	70.2	- 0.6	94	15	43	27	39	2.31	+ 0.13	0.71	0.0	7	10	17	4	sw.	Michigan Home.	
Jeddo.	St. Clair.	667	21	68.2	+ 0.3	90	17	45	26	32	1.95	- 0.92	0.50	0.0	7	12	9	10	s.	Pere Marquette R. R.	
Kalamazoo.	Kalamazoo.	955	34	70.2	+ 0.3	90	16†	47	26	33	2.59	.....	0.00	1.99	0.0	4	9	15	7	sw.	John W. Nichols.
Lansing (Agr'l. College).	Ingham.	820	46	68.2	- 0.4	90	17	44	26	33	1.76	- 1.10	0.63	0.0	0	11	10	12	s.	Grand Rapids & Ind. Ry.	
Lansing (Capitol).	...do...	881	23	69.9	+ 1.4	92	17	45	26	33	1.85	- 0.74	0.68	0.0	11	10	12	9	sw.	Pere Marquette R. R.	
Lapeer.	Lapeer.	827	11	69.6	+ 2.7	94	17	46	26†	41	2.82	+ 0.02	0.71	0.0	7	23	7	0	sw.	Do.	
Ludington.	Mason.	586	12	68.8	- 0.8	84	1	44	4	34	5.15	+ 3.25	1.92	0.0	5	17	7	3	sw.	Pere Marquette R. R.	
Luther.	Lake.	1,028	0	68.4	.....	90	12	40	6	45	5.45	.....	2.55	0.0	7	15	11	5	w.	John W. Nichols.	
Mackinaw.	Cheboygan.	592	14	63.1	- 3.5	86	20	42	11†	36	4.83	+ 0.81	1.75	0.0	7	7	17	7	sw.	Grand Rapids & Ind. Ry.	
Mancelona.	Antrim.	1,121	14	63.8	- 0.7	82	12	37	26	41	2.59	+ 0.19	2.15	0.0	6	24	5	5	e.	Do.	
Manistee.	Manistee.	600	13	68.6	+ 3.6	88	12†	44	31	30	3.80	+ 1.59	1.26	0.0	6	14	12	5	nw.	Pere Marquette R. R.	
Midland.	Midland.	604	11	70.1 <sup>d</sup>	+ 1.2	92	17	48	5	40	1.30	- 0.78	1.00	0.0	3	19	6	3	ne.	Do.	
Montague.	Muskegon.	660	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Gerard A. Whitbeck.	
Morenci.	Lenawee.	811	3	69.6	.....	92	15†	42	27	39	0.98	.....	0.57	0.0	5	15	9	7	sw.	George J. Tripp.	
Mount Clemens.	Macomb.	615	10	.....	.....	94	25	.....	.....	.....	1.86	+ 0.12	0.60	0.0	7	13	6	12	sw.	Water Works.	
Mount Pleasant.	Isabella.	826	11	67.3	+ 0.1	95	28	39	31	45	4.99	- 0.35	1.15	0.0	3	19	6	6	sw.	Pere Marquette R. R.	
Muskegon.	Muskegon.	587	14	68.0	- 0.5	86	12	49	6	36	1.55	- 0.56	1.10	0.0	4	14	8	9	sw.	Grand Rapids & Ind. Ry.	
Old Mission.	Grand Traverse.	858	16	67.6	+ 0.5	88	11†	49	25	32	5.82	+ 2.88	3.25	0.0	6	1	26	4	n.	E. O. Ladd.	
Olivet.	Eaton.	934	20	68.6	+ 0.6	89	17	46	27	28	5.76	+ 3.09	2.95	0.0	7	18	8	5	s.	Prof. G. A. Knapp.	
Omer.	Arenac.	616	11	65.0	+ 0.2	89	22	38	28	44	.....	.....	0.0	0.0	12	10	9	9	sw.	Detroit & Mackinac Ry.	
Onaway.	Presque Isle.	826	7	66.2	.....	87	31	40	1	39	1.45	.....	0.60	0.0	5	0	8	23	sw.	Do.	
Ovid.	Clinton.	760	20	70.4	+ 2.7	90	16†	41	27	37	2.13	- 0.15	0.51	0.0	9	17	6	8	s.	Pere Marquette R. R.	
Owosso.	Shiawasse.	731	13	69.9	- 0.1	92	17	43	27	32	2.68	+ 0.49	0.85	0.0	8	2	27	3	sw.	Owosso Sugar Co.	
Petoskey.	Emmet.	660	20	65.9	+ 0.8	86	22	47	19†	36	3.95	+ 0.86	2.40	0.0	10	11	9	11	w.	Grand Rapids & Ind. Ry.	
Plymouth.	Wayne.	725	13	68.2	.....	91	14	45	27	32	3.03	+ 1.25	1.00	0.0	5	10	19	2	sw.	Pere Marquette R. R.	
Pontiac.	Oakland.	935	10	70.2	+ 2.5	93	17	45	27	32	1.46	- 1.48	0.43	0.0	6	22	5	4	sw.	Fred W. Shaw.	
Port Austin.	Huron.	618	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Pere Marquette R. R.	
Port Huron.	St. Clair.	639	35	67.8	+ 0.5	90	17	45	26	28	1.34	- 1.29	0.51	0.0	10	14	11	16	sw.	U. S. Weather Bureau.	
Reed City.	Oscoda.	1,083	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	State Forestry Com.	
Roscommon.	Roscommon.	1,141	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Postmaster.	
Saginaw.	Saginaw.	601	8	71.0	.....	91	17	46	26	30	2.77	.....	0.80	0.0	9	10	19	2	ne.	Robert B. Hudson.	
Saginaw, W. S.	...do...	601	15	60.4	+ 0.2	93	17	44	26	33	2.68	- 0.41	1.00	0.0	9	14	6	5	ne.	Rev. N. Wilhelm.	
St. James.	Charlevoix.	614	4	63.4	.....	80	11†	38	5	34	4.64	.....	2.00	0.0	8	7	4	20	sw.	City of St. Joseph.	
St. Joseph.	Berrien.	593	23	71.4	+ 0.9	89	11	53	26	32	.....	.....	0.0	0.0	14	10	7	5	nw.	Pere Marquette R. R.	
Sandusky.	Sanilac.	790	1	67.0	.....	89	15	40													

TABLE 1.—Climatological data for August, 1910. District No. 4—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.					Precipitation, in inches.			Sky.			Prevailing wind direction.	Observers.						
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmetted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.				
<i>Ohio—Cont'd.</i>																						
North Royalton	Cuyahoga	1,000	18	72.0	+ 1.6	96	14	45	27	36	1.24	- 2.37	0.75	0.0	5	23	7	1	nw.	W. S. Edgerton.		
Norwalk	Huron	719	24	70.0	- 0.5	95	17	43	27	42	1.29	- 1.81	0.64	0.0	6	16	12	3	sw.	Dr. Albert Sheldon.		
Oberlin	Lorain	855	35	72.2	+ 2.8	94	15	42	27	39	1.05	- 1.51	0.47	0.0	4	4	21	6	sw.	Prof. F. F. Jewett.		
Ottawa	Putnam	720	18	70.6	- 1.5	95	17	44	27	39	2.54	- 0.16	0.94	0.0	5	1	14	18	w.	Prof. J. T. Maidlow.		
Sandusky	Erie	629	33	71.7	+ 0.2	92	3	49	27	26	2.28	- 1.09	1.32	0.0	7	14	11	6	sw.	U. S. Weather Bureau.		
Tiffin	Seneca	775	23	71.8	+ 0.7	93	17	47	27	31	2.84	+ 1.45	1.50	0.0	6	19	10	2	sw.	J. A. Krane, S. J.		
Toledo (1)	Lucas	769	39	71.8	+ 0.0	95	17	52	26	26	1.95	- 0.75	1.16	0.0	9	16	8	7	sw.	U. S. Weather Bureau.		
Toledo (2)	Wyandot	854	27	72.4	+ 1.4	93	15	44	27	37	2.59	- 0.69	1.17	0.0	10	8	20	4	sw.	Prof. R. J. Klefer.		
Upper Sandusky	Vickery	588	17	71.6	+ 0.6	100	17	49	27	40	1.82	- 0.96	1.32	0.0	5	14	10	7	w.	John W. Barr.		
Wauseon	Fulton	780	38	70.2	- 0.1	97	17	42	27	40	2.50	- 0.15	1.74	0.0	6	7	12	13	ne.	Thomas Mikesell		
Wellington	Lorain	856	18	71.6*	+ 0.4	95 <sup>a</sup>	15	43	27	40 <sup>b</sup>	0.97	- 1.81	0.55	0.0	3	22	6	3	sw.	W. D. Warren.		
Willoughby	Lake	649	16										0.86	- 1.56	0.38	0.0	5	9	14	8	s.	C. J. Richardson.
<i>Pennsylvania.</i>																						
Erie	Erie	713	37	70.0	+ 0.6	88	24	49	27	29	1.76	- 1.33	0.66	0.0	9	14	13	4	s.	U. S. Weather Bureau.		
<i>New York.</i>																						
Adams Center	Jefferson	540	19	68.0	- 0.8	88	13†	44	27	32	3.95	+ 1.17	1.25	0.0	10	10	15	6	s.	A. E. Cooley		
Angelica	Allegany	1,340	27	64.6	- 0.4	85	3†	37	27	39	3.36	- 0.71	1.73	0.0	10	4	17	10	sw.	Charles P. Arnold.		
Appleton	Niagara	270	19																			
Auburn	Cayuga	715	41	68.0	- 0.8	93	16	45	27	33	5.78	+ 2.36	2.00	0.0	9	26	4	1	s.	H. A. Van Wagoner.		
Avon	Livingston	585	15	67.0	+ 0.3	86	3†	45	27†	35	2.15	- 0.99	0.08	0.0	6	20	7	4	sw.	W. G. Markham.		
Blue Mountain Lake	Hamilton	1,750	10																			
Brockport	Monroe	537	14	69.2	+ 0.5	89	3†	46	27	34	2.73	+ 0.14	1.45	0.0	8	12	17	2	w.	B. F. Merwin.		
Buffalo	Erie	767	59	69.4	+ 0.6	86	3	54	26	27	2.72	- 0.27	1.16	0.0	8	6	16	9	sw.	W. H. Lennon.		
Canton	St. Lawrence	448	16	66.8	+ 1.0	86	3	41	30	38	2.68	- 0.00	0.94	0.0	9	10	16	5	sw.	U. S. Weather Bureau.		
Cape Vincent	Jefferson	246	5	66.9	- 2.5	86	3†	47	26†	30	3.06	- 0.78	0.0	0	10	12	11	8	s.	Do.		
Carvers Falls	Washington	243	12	65.1	- 1.3	85	25	41	27	33	5.63	+ 2.29	2.87	0.0	5	24	4	3	s.	Verna M. Rice.		
Chazy	Clinton	151	10	66.8	+ 0.2	84	13†	45	20†	32	2.93	+ 0.13	0.80	0.0	8	18	4	11	s.	Washburn Fancher.		
Danemora	Elba	1,490	5	65.6	- 0.5	82	3†	43	27	28	2.69	- 0.89	0.0	0	12	9	9	s.	W. R. North.			
Fayetteville	Genesee	500	11	66.6	- 0.5	86	3	44	27	35	2.40	- 0.09	0.65	0.0	5	18	4	4	sw.	W. N. Thayer.		
Gabriels	Onondaga	530	9	65.0	- 0.0	89	14†	47	27	37	3.48	- 0.22	0.92	0.0	8	15	12	4	sw.	Jos. S. Wilford.		
Harkness	Franklin	1,729	8	62.0	- 0.1	83	13	35	27	41	3.23	- 0.74	0.0	0	11	12	9	10	se.	Dana H. Wells.		
Hemlock Lake	Clinton	623	8	65.0	- 0.5	84	25	39	30	33	2.34	- 0.69	0.0	0	10	21	5	5	s.	Sanatorium.		
Hunt	Livingston	900	12	68.0	- 0.9	85	3	48	30	29	5.00	+ 2.05	1.60	0.0	6	14	5	12	s.	J. W. Harkness.		
Ithaca	Tompkins	1,321	11	68.3	+ 0.8	90	16	42	27	33	3.80	+ 1.02	1.28	0.0	7	8	22	1	sw.	D. H. Westbury.		
Keene Valley	Essex	928	32	67.8	- 0.4	89	14	40	27	35	2.39	- 0.85	0.87	0.0	7	12	11	3	sc.	W. S. Barrager.		
King Ferry	Cayuga	1,000	12	64.0	- 0.1	85	13†	35	30	44	2.12	- 1.51	0.74	0.0	14	12	10	9	s.	U. S. Weather Bureau.		
Lake George	Warren	350	13	67.8	+ 1.1	86	14	42	27	36	4.35	+ 0.26	2.24	0.0	7	10	18	3	s.	E. R. Wells.		
Lake Placid Club		1,864	3	57.4	- 0.5	76	13†	34	27	34	4.65	- 0.67	0.0	0	12	15	10	6	w.	Lucius A. Goodey.		
Le Roy	Genesee	920	20	68.0	+ 1.1	87	15	46	27	32	3.17	+ 0.08	1.13	0.0	9	11	10	10	s.	Charles Forssell.		
Lockport	Niagara	650	23	68.0	0.0	85	17†	47	27	29	3.05	+ 0.46	1.40	0.0	9	15	1	15	sw.	F. W. Ball.		
Lewis	Lewis	900	43	64.9	+ 0.1	86	3†	38	27	40	4.20	+ 0.98	1.03	0.0	8	20	6	5	s.	J. E. Wakeman.		
Lyndonville	Orleans	200	14																			
Moiré	Franklin	100	10	67.3	+ 1.0	86	3†	42	30	36	3.22	- 0.03	1.00	0.0	10	13	17	1	w.	Henry van Hoevenberg.		
Nehasane	Hamilton	1,750	2	61.0	- 0.1	84	14	31	27	39	5.21	- 0.03	1.03	0.0	14	18	6	7	e.	F. W. Ball.		
North Lake	Herkimer	1,822	9	63.5	+ 0.5	86	15	40	27†	36	2.97	- 0.96	1.32	0.0	7	18	3	10	sw.	J. E. Wakeman.		
Ogdensburg	St. Lawrence	175	26	68.7	+ 1.5	86	3†	47	27	32	2.43	- 0.61	0.51	0.0	9	19	10	2	sw.	Charles J. Rice.		
Old Forge	Herkimer	1,733	2	63.9	- 0.5	87	15	38	27	40	6.60	- 2.40	0.0	0	10	21	8	2	w.	Milton St. John.		
Oswego	Oswego	335	40	67.8	- 1.0	86	25	49	27	38	4.65	+ 1.96	1.56	0.0	12	11	10	10	s.	A. C. McBride.		
Otto	Cattaraugus	1,410	6	70.0	- 0.3	86	15†	44	28	37	3.62	- 1.05	0.0	0	8	19	8	4	sw.	H. A. Paul.		
Palermo	Oswego	460	51																			
Perry City	Schuyler	1,038	30	66.9	+ 0.8	89	4	36	27†	50	2.28	- 1.33	0.78	0.0	8	16	10	5	sw.	State Hospital.		
Philadelphia	Jefferson	485	4	60.8	- 0.5	86	26	43	27†	41	4.71	- 1.38	0.0	0	11	8	19	4	w.	Stuart W. Nelson.		
Plattsburgh	Clinton	170	60	60.2*	+ 1.9	92	3	46	24	37†												
Potsdam	St. Lawrence	300	34	62.6	- 3.8	89	4	34	30	40	3.83	+ 0.43	1.50	0.0	9	17	0	14	sw.	E. B. Bartlett.		
Raquette Lake	Hamilton	2	62.5	- 0.5	80	15	40	31	33	3.87	- 0.94	0.0	0	11	17	5	9	w.	T. P. Davison.			
Rochester	Monroe	523	81	69.1	+ 0.8	89	3	49	27	38	3.10	+ 0.14	2.45	0.0	11	13	10	9	sw.	A. E. Sutuerland.		
Romulus	Seneca	719	18	69.0	- 0.3	88	16†	47	27	35	3.36	+ 0.13	1.66	0.0	7	15	7	9	sw.	R. J. Dunning.		
Shortsville	Ontario	740	11	68.1	+ 0.1	86	25	47	27†	33	3.44	+ 0.63	1.29	0.0	9	15	13	3	sc.	U. S. Weather Bureau.		
Skaneateles	Onondaga	15																				
Syracuse	.do.	597	8	68.7	+ 0.1	87	15	47	27	38	3.39	+ 0.06	0.91	0.0	10	11	11	9	s.	Edward Conroy.		
Ticonderoga	Essex	344	12	68.5	+ 0.6	88	3†	42	27	39	2.65	- 0.47	1.98	0.0	3	20	7	4	s.	U. S. Weather Bureau.		
Trudeau	.do.	1,620	17																			
Tupper Lake	Franklin	1,522	10	62.5	+ 1.2	80	4†	40	30	34†	3.14	- 0.67	0.68	0.0	11	18	4	9	w.	A. M. De Lano.		
Vulosa	Chautauqua	1,167	11	67.9	+ 1.2	88	3†	41	27	39	2.43	- 0.22	0.93	0.0	6	11	16	4	w.	Eva M. De Lano.		
Wanakena	St. Lawrence	0	64.0			89	15	33	27	45	5.41	- 0.34	0.0	0	9	7	12	12	sw.	Daniel Smith.		
Watertown	Jefferson	737	18	67.9	- 0.4	88	3	46	27	33	3.98	+ 0.49	1.14	0.0	10	20	7	4	sw.	Aaron W. Maddox.		
Wedgewood	Schuyler	1,430	21	68.5	+																	

TABLE 2.—*Daily precipitation for August, 1910. District No. 4, Lake Region.*

Stations.	River basins.	Day of month.																													Total.			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Minnesota.																																		
Duluth.	Lake.	.04	T.					.06	.09	T.			1.53	.18			T.	.21					.01	T.	.01	.03	T.	.25			2.41			
Floodwood.	do							.27	.00	.03			.35																					
Mount Iron.	do							.15	.01			.17	.13	.03		.67			T.													1.04		
Stephens Mine.	do																																1.45	
Two Harbors.	do																																2.00	
Virginia.	do																																	
Wisconsin.																																		
Appleton.	Fox.	.06	.09																															4.10
As bland.	Lake.	.12	.22																															1.87
Bayfield.	do																																1.44	
Cecil.	Fox.	.39	.75																														4.53	
Chilton.	do	.12																															3.46	
Crandon.	do	.80																															2.63	
Florence.	Menominee.	.09																															2.75	
Fond du Lac.	Fox.	.07																															4.22	
Grand River Locks.	do																																4.18	
Green Bay.	Lake.	.01	.03																														5.08	
Iron River.	do	.08	.60																														2.08	
Kewaunee.	do																																4.65	
Manitowoc.	do	.02																															3.17	
Menasha.	Fox.	.06																															3.53	
Menominee Falls.	Lake.	T.	T.	.30																													3.43	
Milwaukee.	do	.01	.25																														2.75	
New London.	Fox.	.15																															2.78	
Oconto.	Lake.	.38	.39																														5.98	
Oshkosh.	Fox.	.15																															3.31	
Pine River.	do	.10																															1.63	
Plum Island.	Lake.	.43																															7.76	
Plymouth.	do	.09	T.																														4.02	
Port Washington.	do	.51																															3.03	
Racine.	do	.01	.04																														2.24	
Ripon.	Fox.	.08																																5.97
Sheboygan.	Lake.	.08	.30																														4.93	
Sturgeon Bay.	do	T.	.63																														7.01	
Superior.	do																																1.87	
Waupaca.	Fox.	.28	.01																														2.66	
Illinois.																																		
Chicago.	Lake Michigan.	12	T.																														3.08	
Indiana.																																		
Auburn.	Maumee.	.37																															4.11	
Berne.	do	.07																																2.25
Elkhart.	St. Joseph.	.29																															4.01	
Fort Wayne.	Maumee.	.08	T.																														3.98	
Hammond.	Lake Michigan.	.40																															3.12	
Howell.	St. Joseph.	.27																															1.03	
South Bend.	do	.04																															2.82	
Whiting.	Lake Michigan.	20																															4.09	
Michigan—Upper Peninsula.	Lake.																																	
Baraga.	Ontonagon.	1.20	T.																														3.50	
Bergland.	Manistique.	.20	.70																														3.52	
Blaney.	Lake.	.20	.21																														4.24	
Calumet.	do	.03	.52	.04																													4.69	
Chatham.	do	.25																															3.97	
Deer Park.	St. Marys.																																1.90	
Detour.	do																																	
Eagle Harbor.	Lake.	.40	T.																														3.56	
Escanaba.	do	T.	.15	T.																													5.22	
Ewen.	Ontonagon.	1.02																															4.14	
Grand Marais.	Lake.																																	
Houghton.	do	.02	.57	.18																													4.51	
Humboldt.	Escanaba.	1.11																															3.18	
Iron Mountain.	Menominee.	1.20	.30																														2.56	
Iron River.	do																																2.90	
Ironwood.	Lake.	.10	.48	.08																													2.40	
Ishpeming.	Escanaba.	.15	.20	.10																													2.65	
Isle Royale.	Lake.	.10	.22																														2.17	
Mackinac Island.	do																																	
Maple Ridge.	do	1.02																															5.07	
Marquette.	do	.36	.02																														3.33	
Menominee.	do	.82																															4.57	
Newberry.	Tequamenon.																																	
Powers.	Lake.																																	
St. Ignace.	do	.42	.63	.05</td																														

TABLE 2.—*Daily precipitation for August, 1910. District No. 4—Continued.*

TABLE 2.—*Daily precipitation for August, 1910. District No. 4—Continued.*

TABLE 3.—Maximum and minimum temperatures at selected stations, August, 1910. District No. 4, Lake Region.